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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,343	04/11/2006	Junjie Ling	HCH-102	7898

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GLOBAL IP SERVICES
7285 W. Eagle Court
Winton, CA 95388

EXAMINER	
ESHETE, ZELALEM	
ART UNIT	**PAPER NUMBER**
3748	

MAIL DATE	DELIVERY MODE
01/16/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/595,343	LING ET AL.	
	Examiner	Art Unit	
	Zelalem Eshete	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-3,9,12 and 16 is/are rejected.

7)☒ Claim(s) 4-8,10,11,13-15 and 17-20 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 4/11/2006.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office action is in response to the preliminary amendment filed on 4/11/2006.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3,9,12,16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schechter et al. (5,275,136) in view of Ling et al. (CN 1337539A).

Regarding claim 1: Schechter discloses a variable engine valve control system with pressure difference comprising a hydraulic supply equipment, a hydraulic actuator apparatus, a valve 6 and a spring 4--for controlling piston balance (see figure 4); said hydraulic actuator includes a hydraulic cylinder, a piston and a piston rod (see numeral 26); said piston rod is coupled and moved with said valve (see numeral 18); wherein said piston divides said hydraulic cylinder into a upper chamber and a lower chamber (see figures 5, numeral 26); said hydraulic supply equipment is connected with said upper chamber of said hydraulic cylinder through a general fluid inlet pipe, and said

lower chamber of the said hydraulic cylinder is connected with said hydraulic supply equipment (see figures 5).

Schechter fails to disclose a pressure difference proportional relief valve.

However, Ling teaches a pressure difference proportional relief valve (see figure 1). Ling further teaches that such arrangement is favorable for designing proportional electromagnet and directly used in hydraulic system (see abstract).

It would have been obvious to one having an ordinary skill in the art at the time the invention was made to modify the system of Schechter by providing a pressure difference proportional relief valve as taught by Ling in order to provide favorable system design in hydraulic system as taught by Ling.

Regarding claim 2: Ling discloses said pressure difference proportional relief valve can be a pressure difference feedback control spool valve which includes a valve body, spool valve core, proportional electromagnet (see figure 1), as well as fluid inlet port, fluid outlet port and fluid drain port on said valve body (see numeral 1, P,P1,T); said valve body is equipped with a horizontally arranged transverse passage matched with said spool valve core (see numeral 5); On said spool valve core is equipped with a column boss which can move with said spool valve core, thereby close or open the control fluid port of said column boss connected with a fluid drain port (see numeral 20); one end of said spool valve core is concentrically contact with the crown bar of said

proportional electromagnet (see numeral 6); The other end of said spool valve core is supported to a spring (see numeral 7); on the left side of said valve body there is a left side passage connected with the upper chamber of said hydraulic cylinder and said hydraulic supply equipment through said fluid inlet port (see numeral 8); on the central position of said valve body there is a longitudinal passage connected to said transverse passage and connected with the lower chamber of said hydraulic cylinder through said fluid outlet port (see numeral 10); there is a damping passage with damping between said left side passage and said longitudinal passage (see numeral 9); the upper end of said longitudinal passage is connected to the left end of a right upper side passage of said valve body (see numeral 12); the right end of said right upper side passage is connected with a right end passage of said valve body (see numeral 11); at the right lower side of said valve body is situated a right lower side passage with its one end connected with said fluid drain port and its other end connected with said transverse passage (see numeral 13).

Regarding claim 12: Schechter discloses a variable engine valve control system with pressure difference comprising a hydraulic supply equipment, a hydraulic actuator apparatus a valve and a spring for controlling piston balance (see figure 4), said hydraulic actuator apparatus comprises a hydraulic cylinder, a piston and a piston rod; said piston rod is coupled and moved with the valve, wherein said piston divides said hydraulic cylinder into a upper chamber and a lower chamber (see figures 5), said upper

chamber and said lower chamber are connected with the first fluid port and the second fluid port (see figure 1).

Schechter fails to disclose a pressure difference proportional relief valve.

However, Ling teaches a pressure difference proportional relief valve (see figure 1). Ling further teaches that such arrangement is favorable for designing proportional electromagnet and directly used in hydraulic system (see abstract).

It would have been obvious to one having an ordinary skill in the art at the time the invention was made to modify the system of Schechter by providing a pressure difference proportional relief valve as taught by Ling in order to provide favorable system design in hydraulic system as taught by Ling.

Regarding claim 3: Ling discloses the damping in said damping passage is a damping aperture (see numeral 3).

Regarding claims 9,16: Ling discloses a pressure accumulator can be mounted on said general fluid inlet pipe (see figure 2).

Allowable Subject Matter

3. Claims 4-8,10,11,13-15,17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zelalem Eshete whose telephone number is (571) 272-4860. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Zelalem Eshete
Primary Examiner
Art Unit 3748